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# AMD Performance Library

Product Overview

March 1, 2007

# Overview

The AMD Performance Library is a collection of popular low level software routines beginning with simple arithmetic and extending into rich domains such as image and signal processing

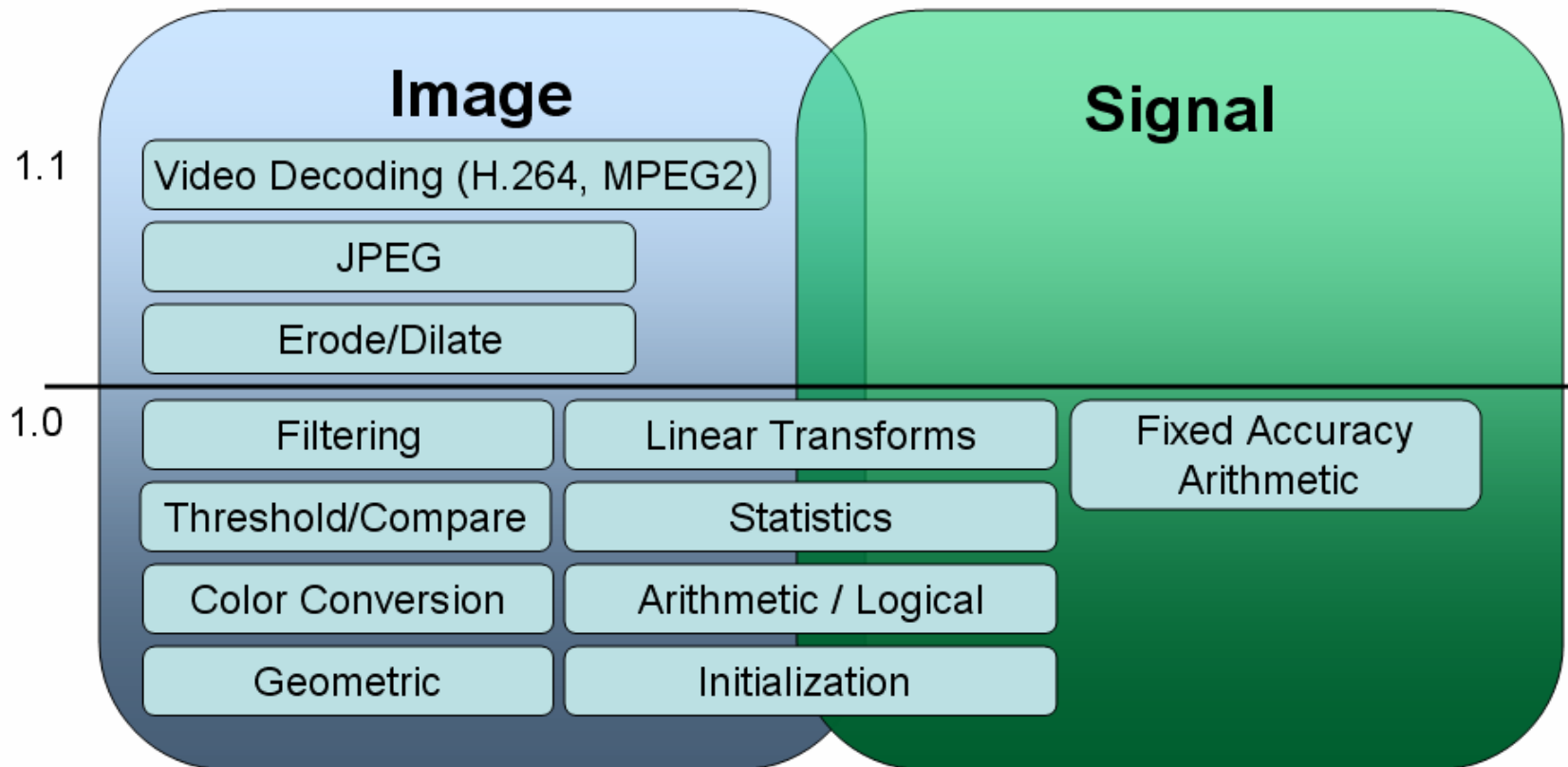
- Leverages multi-core processors
- Accelerates application development
- Available as static and dynamic libraries
- Provides future proof interfaces to the processor

## Architected for the Future

- Quick upgrade path to new processor technologies
- Multiple OS and platform support
- Multiple code paths based on processor features
- Highly scalable and configurable thread management

	<b>Win32</b>	<b>Win64</b>	<b>Linux® 32</b>	<b>Linux 64</b>
Static lib	✓	✓	✓	✓
Dynamic lib	✓	✓	✓	✓

# Functions



Future plans for APL Version 1.1 are subject to change

# Base Functions

	Examples
Memory Allocation	Malloc, Free
Machine Information	GetCPUType, GetCPUClocks
Library Information	GetLibraryVersion, GetStatusString
Dispatch Control	StaticInitCPU, GetInitType
Thread Control	SetNumThreads

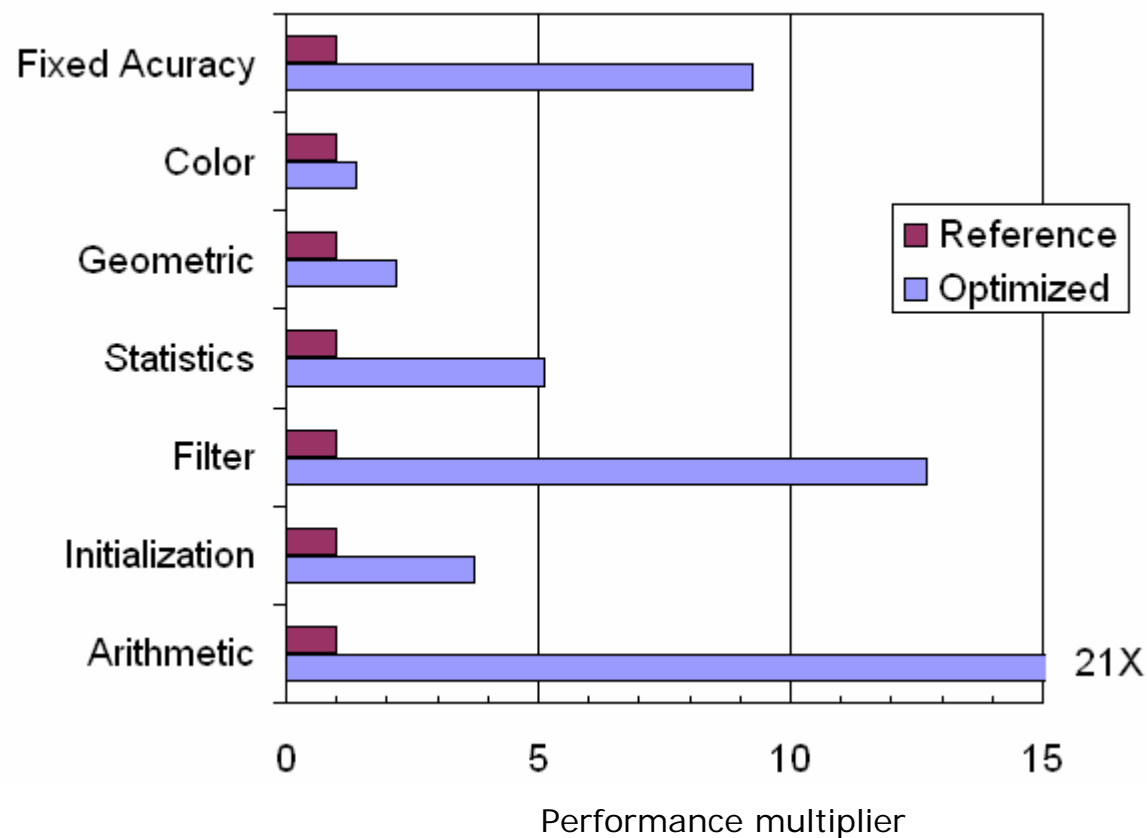
# Image Functions

	Examples
Initialization	Copy, Set, Zero, Move, Convert, Scale
Arithmetic	Add, Sub, Mul, Div, Abs, Exp, Ln, Sqr
Logical	Shift, Not, Or, Xor, And
Geometric	Resize, ResizeShift, Rotate, WarpAffine
Statistics	Min, Max, Magnitude,
Color Conversion	RGB, HLS, YCbCr, LUV, HSV, YUV
Filter	Filter, FilterBox, Sharpen, FilterGauss
Color Video	Motion Compensation, Motion Estimation

# Signal Functions

	Examples
Initialization	Convert, Copy Move
Arithmetic	Add, Sub, Mul, Div, Cubrt, DotProd, Exp, Ln
Logical	Shift, Not, Or, Xor, And
Statistics	Min, Max, Magnitude, StdDev
Fixed Precision	Arctan, Cbrt, Div, Exp, Pow
FFT	FFTFwd, FFTInv

# APL Performance Gains



Optimized vs. Reference code paths running on AMD hardware



## Resources

Free binary licensing for end-users and distribution

Downloads by OS and 32/64 bit target

Sample application demonstrating use of the library

<http://developer.amd.com/apl.jsp>

HTML Help

[http://developer.amd.com/apl\\_help/index.htm](http://developer.amd.com/apl_help/index.htm)

World-wide Support

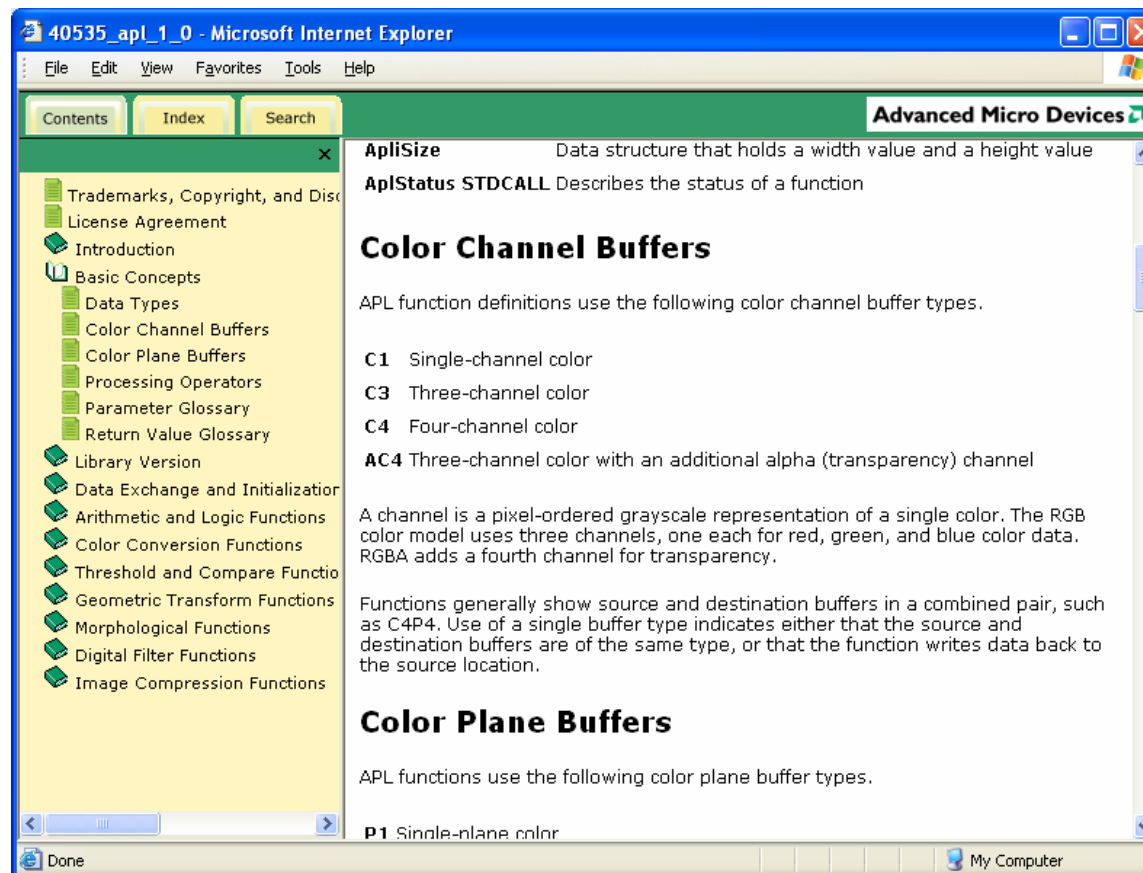
Product feedback

Subject line "APL-Support"

[tech.support@amd.com](mailto:tech.support@amd.com)

# API Documentation

Available in a pdf download and on-line HTML



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